U.S. Serial No. 10/754,547

AMENDMENTS TO THE CLAIMS

Please replace all prior versions, and listings, of the claims in the application with the following amended listing of claims:

1. (Currently Amended) A method of treating <u>Crohn's disease or ulcerative colitis an inflammatory related disease associated with cytokine expression levels</u>, which comprises administering to an animal in need of such treatment at least one compound of formula (I), (II) or (III)

$$R_{4}$$
 R_{5}
 R_{6}
 R_{10}
 R_{10}
 R_{10}
 R_{10}

FORMULA (I)

$$R_{5}$$
 R_{6}
 R_{1}
 R_{2}
 R_{7}
 R_{8}

FORMULA (II)

$$R_4$$
 R_5
 R_6
 R_1
 R_2
 R_7
 R_8

FORMULA (III)

wherein the compound is administered in an amount sufficient to treat the inflammatory-related disease by inhibiting pro-inflammatory cytokine expression or by stimulating anti-inflammatory cytokine expression, but the amount is less than sufficient to substantially inhibit cyclin dependent kinases;

R₃, R₄, R₅, R₆, R₇, R₈, R₉, and R₁₀ are the same or different and represent a hydrogen atom; a hydroxy group; a nitroso group; a nitro group; a monosaccharide; a disaccharide; a halogen atom; a hydrocarbyl group, or a functional hydrocarbyl group unsubstituted or substituted with one or more hydroxy moieties, carboxy moieties, nitroxy moieties, monosaccharides, disaccharides, amines, amides, thiols, sulfates, sulfonates, sulfonamides or halogens, wherein the hydrocarbyl has 1 to 8 carbon atoms; a -R₁₁R₁₂ group, wherein R₁₁ and R₁₂ can be the same or different and represent a hydrogen atom, a straight-chain or branched-chain alkyl group having 1 to 18 carbon atoms which can additionally carry one or more hydroxy and/or amino groups, a substituted or unsubstituted aryl group which can comprise one or more heteroatoms, or an acyl group, or R₁₁ and R₁₂ form together a ring having 2 to 6, optionally substituted, CH₂ groups; an azo group -N=N-R₁₃, wherein R₁₃ represents an aromatic system which can be substituted by one or more carboxyl groups and/or phosphoryl groups, or a group selected from the group consisting of sugars, amino acids, peptides or steroid hormones; or R₁ and R₆, and R₂ and R₇, respectively, form independently from each other a ring together having 1 to 4, optionally substituted, CH₂ groups; and

R₁ and R₂ are the same or different and represent a hydrogen atom; a halogen atom; a hydroxy group; a hydrocarbyl group, or a functional hydrocarbyl group unsubstituted or substituted with one or more hydroxy moieties, carboxy moieties, nitroxy moieties, monosaccharides, disaccharides, amines, amides, thiols, sulfates, sulfonates, sulfonamides or halogens, wherein the hydrocarbyl has 1 to 8 carbon atoms; a mono-, di- or trialkylsilyl group having 1 to 6 carbon atoms independently of each other in each instance in the straight-chain or branched-chain alkyl group; a mono-, di- or triarylsilyl group with substituted or unsubstituted aryl groups independently of each other in each instance; a -NR₁₇R₁₈ group, wherein R₁₇ and R₁₈ can be the same or different and represent a hydrogen atom, a straight-chain or branched-chain alkyl group having 1 to 18 carbon atoms which can additionally carry one or more hydroxy and/or amino groups, a substituted or unsubstituted aryl group which can comprise one or more heteroatoms, or an acyl group; a methyleneamino group -CH₂-NR₁₇R₁₈, wherein R₁₇ and R₁₈ have

the above definitions; a physiological amino acid residue bound to the nitrogen as an amide, substituted or unsubstituted monosaccharide, disaccharides or oligosaccharides; or a sugar, amino acid, peptide or steroid hormone; wherein the disease is selected from the group consisting of arthritis, rheumatoid arthritis, an inflammatory bowel disease; multiple sclerosis; stroke; kidney failure; lupus; pancreatitis; allergy; fibrosis; anemia; a metabolic disease; a bone disease; a chemotherapy/radiation related complication; diabetes type I; diabetes type II; a liver disease; a gastrointestinal disorder; an ophthamological disease; allergic conjunctivitis; diabetic retinopathy; Sjogren's syndrome; uvetitis; a pulmonary disorder; dermatitis; HIV related eachexia; cerebral malaria; ankylosing spondolytis; leprosy; anemia; fibromyalgia; and Parkinson disease.

- 2. (Original) The method according to claim 1, wherein at least R_1 or R_2 is a monosaccharide, a disaccharide unsubstituted or substituted with one or more hydroxy moieties or carboxy moieties; a halogen; a hydrocarbyl group, or a functional hydrocarbyl group unsubstituted or substituted with one or more hydroxy moieties, carboxy moieties, nitroxy moieties, monosaccharides, disaccharides, amines, amides, thiols, sulfates, sulfonates, sulfonamides or halogens, wherein the hydrocarbyl has 1 to 8 carbon atoms.
- 3. (Original) The method according to claim 2, wherein at least R_1 or R_2 is a group that increases the solubility of the compound.
- 4. (Withdrawn) The method according to claim 2, wherein at least R_1 or R_2 is a triacetylated monosaccharide.
- 5. (Original) The method according to claim 2, wherein at least R_1 or R_2 is a methyl group.
- 6. (Withdrawn) The method according to claim 5, wherein R_1 or R_2 is an acetylated monosaccharide.
- 7. (Original) The method according to claim 1, wherein the animal is a human being.

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8. (Original) The method according to claim 1, wherein at least two of the compounds are administered concurrently or sequentially.

9. (Original) The method according to claim 1, wherein the compound is administered in combination with an anti-inflammatory agent.

10-16. (Cancelled)

17. (Original) The method according to claim 1 wherein the compound is administered at a concentration sufficient to inhibit cytokine IL-1 α , β , IL-2, IL-3, IL-6, IL-7, IL-9, IL-12, IL-17, IL-18, TNF- α , LT, LIF, Oncostatin, or IFNc1 α , β , γ .

18. (Original) The method according to claim 1, where the compound is administered at a concentration sufficient to stimulate expression of cytokine IL-4, IL-10, IL-11, W-13 or $TGF\beta$.

19. (Currently Amended) A method of treating an inflammatory-related disease associated with cytokine expression levels in an animal, wherein the inflammatory-related disease is being treated is selected from the group consisting of: an inflammatory bowel disease, rheumatoid arthritis; lupus; a gastrointestinal complication; chemotherapy/radiation related complication; diabetes type I; diabetes type II; a liver disease; a gastrointestinal disorder; an ophthamological disease; allergic conjunctivitis; diabetic retinopathy; Sjogren's syndrome; uvetitis; a pulmonary disorder; dermatitis; HIV related cachexia; cerebral malaria; ankylosing spondolytis; leprosy; arthritis; multiple selerosis; stroke; kidney failure; pancreatitis; an allergy; fibrosis; anemia; and fibromyalgia, the method comprising administering to an animal in need of such treatment at least one compound of formula (I), (II) or (III)

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$$\begin{array}{c|c} R_3 & O & R_2 & R_7 \\ \hline R_4 & R_5 & R_{10} & R_{10} \\ \hline R_6 & R_1 & R_{10} \\ \end{array}$$

FORMULA (I)

$$R_{5}$$
 R_{6}
 R_{1}
 R_{2}
 R_{7}
 R_{8}

FORMULA (II)

$$\begin{array}{c|c} R_{10} \\ R_{5} \\ R_{6} \\ R_{1} \end{array}$$

FORMULA (III)

wherein the compound is administered in an amount sufficient to treat the cytokine-induced inflammatory-related disease;

R₃, R₄, R₅, R₆, R₇, R₈, R₉, and R₁₀ are the same or different and represent a hydrogen atom; a hydroxy group; a nitroso group; a nitro group; a monosaccharide; a disaccharide; a halogen atom; a hydrocarbyl group, or a functional hydrocarbyl group unsubstituted or substituted with one or more hydroxy moieties, carboxy moieties, nitroxy moieties, monosaccharides, disaccharides, amines, amides, thiols, sulfates, sulfonates, sulfonamides or halogens, wherein the hydrocarbyl has 1 to 8 carbon atoms; a -R₁₁R₁₂ group, wherein R₁₁ and R₁₂

can be the same or different and represent a hydrogen atom, a straight-chain or branched-chain alkyl group having 1 to 18 carbon atoms which can additionally carry one or more hydroxy and/or amino groups, a substituted or unsubstituted aryl group which can comprise one or more heteroatoms, or an acyl group, or R_{11} and R_{12} form together a ring having 2 to 6, optionally substituted, CH_2 groups; an azo group -N=N-R₁₃, wherein R_{13} represents an aromatic system which can be substituted by one or more carboxyl groups and/or phosphoryl groups; or a group selected from the group consisting of sugars, amino acids, peptides or steroid hormones; or R_1 and R_6 , and R_2 and R_7 , respectively, form independently from each other a ring together having 1 to 4, optionally substituted, CH_2 groups; and

R₁ and R₂ are the same or different and represent a hydrogen atom; a halogen atom; a hydroxy group; a hydrocarbyl group, or a functional hydrocarbyl group unsubstituted or substituted with one or more hydroxy moieties, carboxy moieties, nitroxy moieties, monosaccharides, disaccharides, amines, amides, thiols, sulfates, sulfonates, sulfonamides or halogens, wherein the hydrocarbyl has 1 to 8 carbon atoms; a mono-, di- or trialkylsilyl group having 1 to 6 carbon atoms independently of each other in each instance in the straight-chain or branched-chain alkyl group; a mono-, di- or triarylsilyl group with substituted or unsubstituted aryl groups independently of each other in each instance; a -NR₁₇R₁₈ group, wherein R₁₇ and R₁₈ can be the same or different and represent a hydrogen atom, a straight-chain or branched-chain alkyl group having 1 to 18 carbon atoms which can additionally carry one or more hydroxy and/or amino groups, a substituted or unsubstituted aryl group which can comprise one or more heteroatoms, or an acyl group; a methyleneamino group -CH₂-NR₁₇R₁₈, wherein R₁₇ and R₁₈ have the above definitions; a physiological amino acid residue bound to the nitrogen as an amide, substituted or unsubstituted monosaccharide, disaccharides or oligosaccharides; or a sugar, amino acid, peptide or steroid hormone.

20. (Currently Amended) The method according to claim 19, wherein the inflammatory bowel disease is Crohn's disease or ulcerative colitis; the gastrointestinal complication is diarrhea; the liver disease is selected from the group consisting of: an autoimmune hepatitis, hepatitis C, primary biliary cirrhosis, primary sclerosing cholangitis, or fulminant liver failure; the gastrointestinal disorder is selected from the group consisting of: celiac disease and non-specific colitis; and the pulmonary disorder is selected from the group

consisting of: allergic rihinitis, asthma, chronic obstructive pulmonary disease, chronic granulomatous inflammation, cystic fibrosis, and sarcoidosis.

- 21. (Withdrawn) The method according to claim 19, wherein at least R_1 or R_2 is a monosaccharide, a disaccharide unsubstituted or substituted with one or more hydroxy moieties or carboxy moieties; a halogen; a hydrocarbyl group, or a functional hydrocarbyl group unsubstituted or substituted with one or more hydroxy moieties, carboxy moieties, nitroxy moieties, monosaccharides, disaccharides, amines, amides, thiols, sulfates, sulfonates, sulfonamides or halogens, wherein the hydrocarbyl has 1 to 8 carbon atoms.
- 22. (Previously Presented) The method according to claim 20, wherein at least R_1 or R_2 is a group that increases the solubility of the compound.
- 23. (Withdrawn) The method according to claim 21, wherein at least R_1 or R_2 is an acetylated monosaccharide.
- 24. (Previously Presented) The method according to claim 20, wherein at least R_1 or R_2 is a methyl group.
- 25. (Original) The method according to claim 19, wherein at least two of the compounds are administered concurrently or sequentially.
- 26. (Original) The method according to claim 19, wherein the compound is administered in combination with an anti-inflammatory agent.

27-28. (Cancelled)

29. (Original) The method according to claim 19 wherein the compound is administered at a concentration sufficient to inhibit cytokine IL-1 α , β , IL-2, IL-3, IL-6, IL-7, IL-9, IL-12, IL-17, IL-18, TNF- α , LT, LIF, Oncostatin, or IFNc1 α , β , γ .

AMENDMENT AND RESPONSE

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30. (Withdrawn) The method according to claim 19, where the compound is administered at a concentration sufficient to stimulate expression of cytokine IL-4, IL-10, IL-11, W-13 or $TGF\beta$.

31-34. (Cancelled).